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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
10/602,915	06/25/2003	Kazuhiko Yamamoto	60188-606 1774	
Jack Q. Lever, Jr. McDERMOTT, WILL & EMERY 600 Thirteenth Street, N.W. Washington, DC 20005-3096			EXAMINER	
			VU, QUANG D	
			ART UNIT	PAPER NUMBER
			2811	
			DATE MAILED: 04/26/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

Application No. Applicant(s) Ap			\mathcal{W}					
Examiner		Application No.	Applicant(s)					
Cuang D Vu		10/602,915	YAMAMOTO, KAZUHIKO					
Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. Letherwise interrupt by available windth by provision of 37 CFR 1-136(a). In no event, however, may a reply be limitely filled to the provision of the provision of 37 CFR 1-136(a). In no event, however, may a reply be limitely filled to the provision of the provision of the provision of 37 CFR 1-136(a). In no event, however, may a reply be limitely filled to reply a specified attent on the total control of the provision of the prov	Office Action Summary	Examiner	Art Unit					
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1) Responsive to communication(s) filed on 23 March 2004. 2a) This action is FINAL. 2b) This action is non-final. 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) Claim(s) 1-4 and 19 is/are pending in the application. 4a) Of the above claim(s) is/are withdrawn from consideration. 5) Claim(s) is/are allowed. 6) Claim(s) is/are allowed. 6) Claim(s) is/are rejected. 7) Claim(s) are subject to restriction and/or election requirement. Application Papers 9) The specification is objected to by the Examiner. 10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. Priority under 35 U.S.C. § 119 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * O None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. Attachment(s) 1) Notice of Praftspersor's Patent Drawing Review (PTO-948) 3) Notice of Draftspersor's Patent Drawing Review (PTO-948) 3) Notice of Informal Patent Application (PTO-152)	A SHORTENED STATUTORY PERIOD FOR REPL THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a repl - If NO period for reply is specified above, the maximum statutory period - Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailin earned patent term adjustment. See 37 CFR 1.704(b).	136(a). In no event, however, may a reply be by within the statutory minimum of thirty (30) d will apply and will expire SIX (6) MONTHS from a cause the application to become ABANDON	timely filed ays will be considered timely. m the mailing date of this communication. JED (35 U.S.C. 8 133)					
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DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of group I, claims 1-4 and 19, filed on 03/23/04, is acknowledged.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
- 2. Claims 1-4 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,559,014 to Jeon.

Regarding claim 1, Jeon (figure 1) teaches a semiconductor device comprising:

a gate insulating film (110) having a multilayer structure including a zirconium oxide film (110b) and a high dielectric constant film which is formed of an oxide of a metal (110c) other than zirconium and stacked on the zirconium oxide film (110b) (column 6, line 28 – column 7, line 4; column 7, lines 37-46; column 7, lines 56-64; column 8, lines 29-30).

Regarding claim 2, Jeon teaches the high dielectric constant film is a hafnium oxide film (110c).

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Regarding claim 3, Jeon teaches the high dielectric constant film contains nitrogen (column 11, lines 38-45).

Regarding claim 4, Jeon teaches the gate insulating film includes a zirconium silicate film (110rp) formed under the zirconium oxide film (110b).

Regarding claim 19, Jeon (figure 1) teaches the same material as the claimed invention (zirconium oxide [110b] and hafnium oxide [110c]). Therefore, it inherently teaches a first high dielectric constant film formed of an oxide of a first metal having relatively high oxygen absorption properties and a second dielectric film formed of an oxide of a second metal having relatively low oxygen absorption properties on the first dielectric film.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang D Vu whose telephone number is 571-272-1667. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on 571-272-1732. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

qv April 16, 2004

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